

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Thus, all of claims 1-28 have been replaced by new claims 29-43.

New claim 29 corresponds to original claim 1, but is of far less scope. That is, in claim 29, R^1 has been limited to hydroxy-substituted C_1 - C_3 alkyl; R has been limited to a hydrogen atom or one of the R groups disclosed at page 26, lines 14-20 of the specification, or a group of the formula [4] as set forth in claim 6; G has been limited to a group represented by the formula G3; A has been limited to the $-(CH_2)_s-NR^a-(CH_2)_t-$; R^0 has been limited to a hydrogen atom; and Y^2 has been limited to C_1 - C_4 alkyl.

New claims 30-35 correspond to cancelled claims 7-12, respectively; and new claims 36-39 correspond to cancelled claims 25-28, respectively.

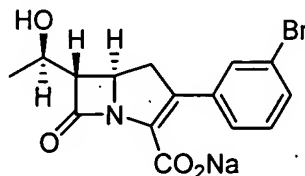
New claims 40-43 are directed to preferred embodiments of the compounds within the scope of new claim 29, as illustrated by Examples 47 and 48 in Table 33 on page 105 of the specification.

The patentability of the presently claimed invention over the disclosures of the references relied upon by the Examiner in rejecting the claims will be apparent upon consideration of the following remarks.

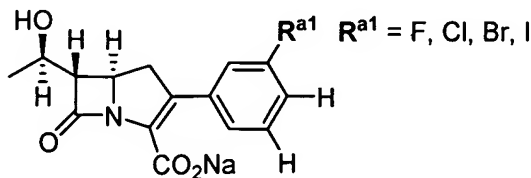
Thus, the rejection of claims 1, 4, 6, 8, 14, 17, 18, and 25-28 under 35 U.S.C. 102(b) as being anticipated by U.S. 5,256,777 is respectfully traversed.

The reference compounds referred to by the Examiner in connection with this rejection are as follows:

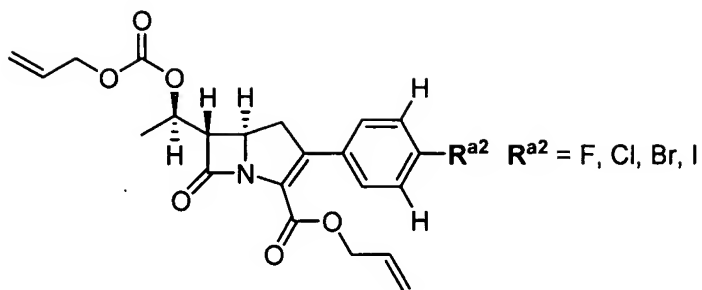
Column 9 EXAMPLE 1



Column 23 TABLE III



Column 24 TABLE V



The compounds set forth in the new claims do not include any of the compounds disclosed in US'777, since in formula [1] in claim 29, G is G3 with $-A-R^0$ as NH_2 and with Y^2 as C_{1-4} alkyl. Compounds having a benzene ring at position 3 of 7-oxo-1-azabicyclo[3.2.0]hept-2-ene (abbreviated as the basic nucleus hereinafter) substituted by both NH_2 and lower alkyl such as CH_3 are not disclosed in US'777, although compounds having the benzene ring substituted by halogen atoms are disclosed therein.

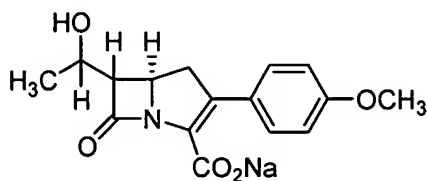
For these reasons, Applicants respectfully submit that the rejection for anticipation based on US'777 should be withdrawn.

The rejection of claims 1-3, 8, 12, 17-18 and 25-28 under 35 U.S.C. 102(b) as being anticipated by U.S. 4,775,669 is respectfully traversed.

The reference compounds referred to by the Examiner in connection with this rejection are as follows:

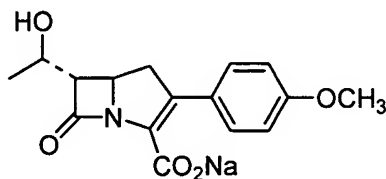
Column 57-58

Compound 41



Column (81-)86

Example 45



On the other hand, in the new claims set forth above, in formula [1], G is G3 with $-A-R^0$ as NH_2 and with Y^2 as C_{1-4} alkyl. Compounds having a benzene ring (at position 3 of the basic

nucleus) substituted by both NH₂ and lower alkyl such as CH₃ are not disclosed in US'669.

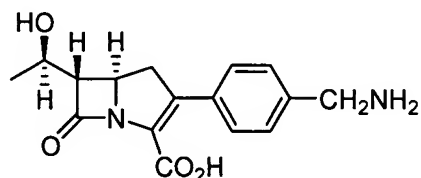
Therefore, the claims of the present application are not anticipated by US'669.

The rejection of claims 1, 5-6, 8, 12, 21 and 25-28 under 35 U.S.C. 103(a) as being unpatentable over Guthikonda et al. or U.S. 4,260,627 is respectfully traversed.

The Guthikonda et al. compound referred to by the Examiner in connection with this rejection is as follows:

Table V

Compound 56



On the other hand, in the new claims set forth above, in formula [1], G is G3 with -A-R⁰ as NH₂ and with Y² as C₁₋₄ alkyl. Compounds having a benzene ring (at position 3 of the basic nucleus) substituted by both NH₂ and lower alkyl such as CH₃ are not disclosed in Guthikonda et al.

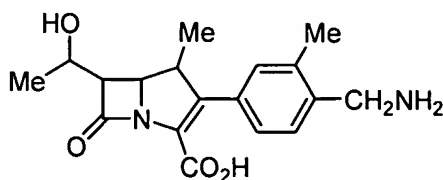
Guthikonda et al. disclose a compound having a benzene ring at position 3 of the basic nucleus substituted only by CH₂NH₂. Namely NH₂ is bound to the benzene ring via CH₂. This compound is obviously different from the compound claimed in the present invention.

In addition, as shown in the Declaration enclosed herewith, the compound of the present invention is unexpectedly superior to even a compound having a benzene ring directly substituted only by NH₂ in oral bioavailability.

With respect to the US'627 reference, as indicated above, the present invention is directed to compounds where in formula [1], G is G3 with -A-R⁰ as NH₂ and with Y² as C₁₋₄ alkyl. A compound having a benzene ring (at position 3 of the basic nucleus) substituted by both CH₂NH₂ and CH₃ and further having CH₃ at position 4 of the basic nucleus is disclosed in US'627 as shown below:

column 41
TABLE V

Compound 26

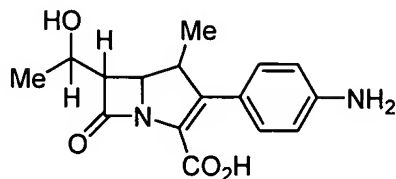


A compound having a benzene ring (at position 3 of the basic nucleus) substituted by NH₂

and further having CH₃ at position 4 of the basic nucleus is also disclosed in US',627 as shown below:

Column 39
TABLE V

Compound 3



Such compounds disclosed in US'627 are obviously different from the compound claimed in the present invention because both reference compounds always have CH₃ at position 4 (position 4 is indicated as position 1 by the Examiner) of the basic nucleus and do not have a benzene ring (at position 3 of the basic nucleus) substituted by both NH₂ and CH₃.

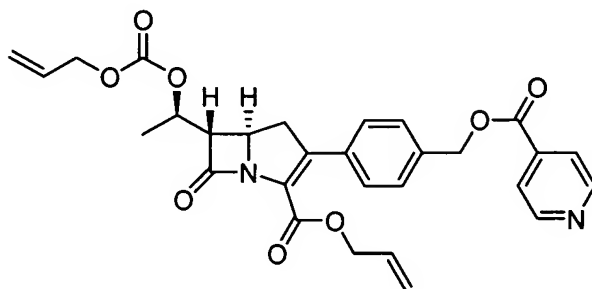
In addition, as shown in the Declaration enclosed herewith, the compound of the present invention is unexpectedly superior to even a compound having a benzene ring directly substituted only by NH₂ and not having CH₃ at position 4 of the basic nucleus in oral bioavailability.

For these reasons, Applicants take the position that the presently claimed invention is not suggested by Guthikonda et al. or US'627.

The rejection of claims 1, 5-6, 8, 12, 21 and 25-28 under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,034,385 is respectfully traversed.

The reference compound referred to by the Examiner in connection with this rejection is as follows:

EXAMPLE 14
Column 27



On the other hand, in the compounds of the present invention, in formula [1], G is G3 with -A-R⁰ as NH₂ and with Y² as C₁₋₄ alkyl. Compounds having a benzene ring (at position 3 of the basic nucleus) substituted by both NH₂ and lower alkyl such as CH₃ are not disclosed in US'385.

Accordingly, the presently claimed compounds are not suggested by the US'385 reference.

The rejection of claims 1, 5-6, 8, 12, 21 and 25-28 under 35 U.S.C. 103(a) as being unpatentable over US'627 in view of Guthikonda et al. is respectfully traversed.

The comments concerning these references as set forth above are equally applicable to this rejection. Applicants take the position that the references do not suggest the presently claimed compounds, where in formula [1], G is G3 with $-A-R^0$ as NH_2 and with Y^2 as C_{1-4} alkyl.

In addition, as shown in the Declaration enclosed herewith, the compound of the present invention is unexpectedly superior to even a compound having a benzene ring directly substituted only by NH_2 and not having CH_3 at position 4 of the basic nucleus in oral bioavailability.

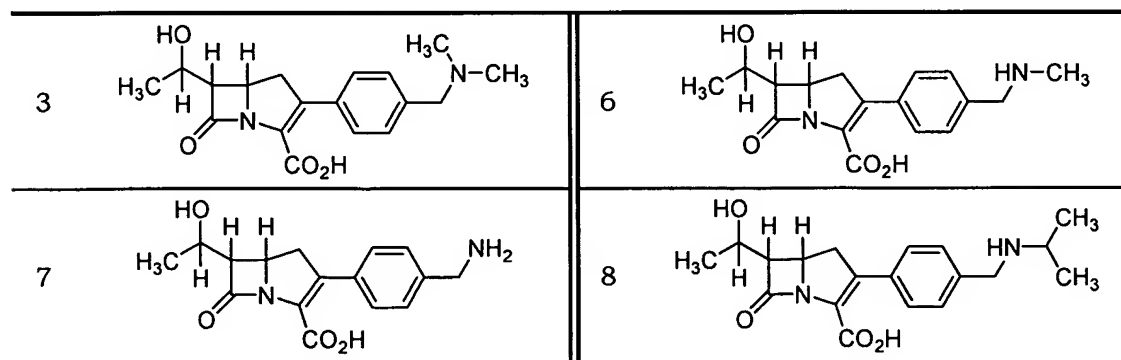
One would not be motivated to prepare the compound of the present invention with such an excellent antibacterial activity based on these references.

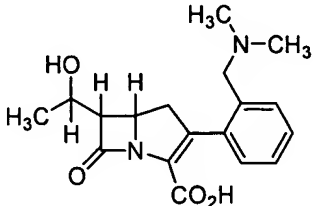
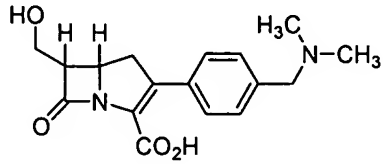
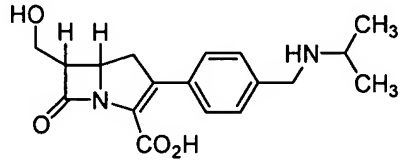
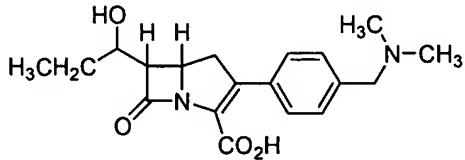
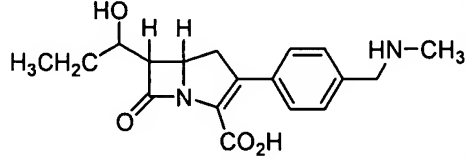
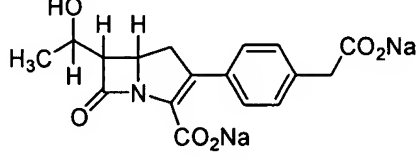
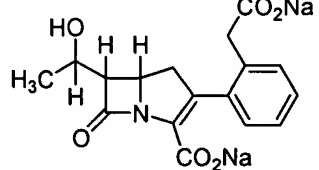
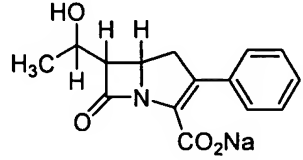
Therefore, the subject matter of the present invention is not suggested even if the disclosures of US'627 and Guthikonda et al. are combined.

The rejection of claims 4-6, 13, 16, and 21 under 35 U.S.C. 103(a) as being unpatentable over US'669 is respectfully traversed.

The comments concerning this reference as set forth above are equally applicable to this rejection.

The other reference compounds referred to by the Examiner in connection with this rejection are as follows:



10		50	
54		118	
123			
11		13	
49			

On the other hand, in the compounds of the present invention, in formula [1], G is G3 with -A-R⁰ as NH₂ and with Y² as C₁₋₄ alkyl.

Compounds having a benzene ring at position 3 of the basic nucleus substituted by many substituents are disclosed in US'669. A compound in which a benzene ring at position 3 of the basic nucleus is substituted only by CH₂NH₂ is also disclosed therein, as in Guthikonda et al. mentioned above. These compounds, as well as the other compounds disclosed in US'669 are obviously different from the compound claimed in the present invention.

Accordingly, the US'669 reference does not suggest the presently claimed compounds.

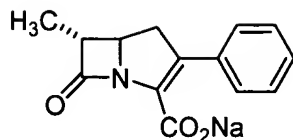
The rejection of claims 1, 4, 14, 17-18 and 25-28 under 35 U.S.C. 103(a) as being unpatentable over US 4,203,902 is respectfully traversed.

The reference compound referred to by the Examiner in connection with this rejection is as

follows:

Column 6
EXAMPLE 1

Compound 9



On the other hand, in the compounds of the present invention, in formula [1], G is G3 with -A-R⁰ as NH₂ and with Y² as C₁₋₄ alkyl.

Therefore, the subject matter of the present invention is not obvious from the disclosure of US'902.

The rejection of claims 6-7 and 9-10 under 35 U.S.C. 103(a) as being unpatentable over US'777, US'669, Guthikonda et al., US'627, US'385 or US'902 in view of US 4,464,299, US 4,429,128, US 4,223,038, US 5,055,463 or US 5,869,477, as well as the rejection of claim 11 under 35 U.S.C. 103(a) as being unpatentable over US'777, US'669, Guthikonda et al., US'627, US'385 or US'902 in view of US'308, US 4,350,703, US'299, US'463 or US 4,536,335, are respectfully traversed.

To the extent that these references have been discussed above, such discussion is equally applicable to these rejections.

Furthermore, all of the new claims corresponding to the rejected claims are dependent claims, which are dependent on new claim 29 corresponding to original claim 1. Since the subject matter of claim 29 is patentable over the primary references for the reasons set forth above, it is Applicants' position that even if the secondary references were combined with the primary references in the manner suggested by the Examiner, the result of such combination would still not suggest the subject matter of these dependent claims.

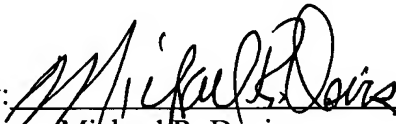
Claims 1, 5-12, 19 and 25-28 have also been rejected for obviousness-type double patenting as being unpatentable over claims US 7,205,291. The Examiner is kindly requested to hold this rejection in abeyance, pending an indication that the claims are otherwise in condition for allowance.

The claim rejections under 35 U.S.C. 112, as well as the claim objections, set forth on the penultimate page of the Office Action have been rendered moot in view of the claim amendments.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of objection and rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Makoto SUNAGAWA et al.

By: 
Michael R. Davis
Registration No. 25,134
Attorney for Applicants

MRD/emj
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
May 14, 2008

Attachment: Declaration